

## SEQUENCE LISTING

<110> Sasisekharan, Ram  
Shriver, Zachary  
Liu, Dongfang  
Venkataraman, Ganesh

<120> Rationally Designed Heparinases Derived  
from Heparinase I and II

<130> M0656/7046/HCL

<150> US 60/098,153

<151> 1998-08-27

<160> 14

<170> FastSEQ for Windows Version 3.0

<210> 1

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<212> DNA

<213> Flavobacterium heparinum

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&lt;211&gt; 772

&lt;212&gt; PRT

&lt;213&gt; Flavobacterium heparinum

&lt;400&gt; 2

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Asp	Ile	Ser	Arg	Gly	Ile	Gly	Leu	Phe	Met	Val	Thr	Gly	Ala	Ile	Val
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Tyr	Asp	Trp	Cys	Tyr	Asp	Gln	Leu	Lys	Pro	Glu	Glu	Lys	Thr	Arg	Phe
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Val	Lys	Ala	Phe	Val	Arg	Leu	Ala	Lys	Met	Leu	Glu	Cys	Gly	Tyr	Pro
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Pro	Val	Lys	Asp	Lys	Ser	Ile	Val	Gly	His	Ala	Ser	Glu	Trp	Met	Ile
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Tyr	Leu	Asn	Val	Arg	Phe	Thr	Asn	Asp	Leu	Phe	Ala	Leu	Trp	Ile	Leu
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&lt;222&gt; (236)...(1324)

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ttccctttc agcgtacttt ttgggtaaat aaccaataaa aactaaagac gg atg aaa      178
                                         Met Lys
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Lys Gln Ile Leu Tyr Leu Ile Val Leu Gln Gln Leu Phe Leu Cys Ser
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gct tac gcc cag caa aaa aaa tcc ggt aac atc cct tac cgg gta aat      274
Ala Tyr Ala Gln Gln Lys Lys Ser Gly Asn Ile Pro Tyr Arg Val Asn
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gtg cag gcc gac agt gct aag cag aag gcg att att gac aac aaa tgg      322
Val Gln Ala Asp Ser Ala Lys Gln Lys Ala Ile Ile Asp Asn Lys Trp
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Val Ala Val Gly Ile Asn Lys Pro Tyr Ala Leu Gln Tyr Asp Asp Lys
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ctg cgc ttt aat gga aaa cca tcc tat cgc ttt gag ctt aaa gcc gaa      418
Leu Arg Phe Asn Gly Lys Pro Ser Tyr Arg Phe Glu Leu Lys Ala Glu
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gac aat tcg ctt gaa ggt tat gct gca gga gaa aca aag ggc cgt aca      466
Asp Asn Ser Leu Glu Gly Tyr Ala Ala Gly Glu Thr Lys Gly Arg Thr
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gaa ttg tcg tac agc tat gca acc acc aat gat ttt aag aaa ttt ccc      514
Glu Leu Ser Tyr Ser Tyr Ala Thr Thr Asn Asp Phe Lys Lys Phe Pro
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cca agc gta tac caa aat gcg caa aag cta aaa acc gtt tat cat tac      562
Pro Ser Val Tyr Gln Asn Ala Gln Lys Leu Lys Thr Val Tyr His Tyr
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ggc aaa ggg att tgt gaa cag ggg agc tcc cgc agc tat acc ttt tca      610
Gly Lys Gly Ile Cys Glu Gln Gly Ser Ser Arg Ser Tyr Thr Phe Ser
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gtg tac ata ccc tcc tcc ttc ccc gac aat gcg act act att ttt gcc      658
Val Tyr Ile Pro Ser Ser Phe Pro Asp Asn Ala Thr Thr Ile Phe Ala
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Met Ile Phe Lys Lys Asn Ile Ala His Asp Lys Val Glu Lys Lys Asp	
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Lys Asp Gly Lys Ile Thr Tyr Val Ala Gly Lys Pro Asn Gly Trp Lys	
215 220 225	
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Val Glu Gln Gly Gly Tyr Pro Thr Leu Ala Phe Gly Phe Ser Lys Gly	
230 235 240	
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Tyr Phe Tyr Ile Lys Ala Asn Ser Asp Arg Gln Trp Leu Thr Asp Lys	
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Tyr Ser Ser Glu Tyr Lys Thr Ser Thr Ile Ala Tyr Lys Met Pro Phe	
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Ala Gln Phe Pro Lys Asp Cys Trp Ile Thr Phe Asp Val Ala Ile Asp	
295 300 305	
tgg acg aaa tat gga aaa gag gcc aat aca att ttg aaa ccc ggt aag	1138
Trp Thr Lys Tyr Gly Lys Glu Ala Asn Thr Ile Leu Lys Pro Gly Lys	
310 315 320	
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Leu Asp Val Met Met Thr Tyr Thr Lys Asn Lys Lys Pro Gln Lys Ala	
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Gly Tyr Tyr Phe Lys Phe Gly Ile Tyr Arg Val Gly Asn Ser Thr Val	
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Ala	Glu	Asp	Asn	Ser	Leu	Glu	Gly	Tyr	Ala	Gly	Glu	Thr	Lys	Gly	
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&lt;210&gt; 6

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&lt;212&gt; PRT

&lt;213&gt; Flavobacterium heparinum

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&lt;212&gt; PRT

&lt;213&gt; Flavobacterium heparinum

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&lt;212&gt; PRT

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&lt;400&gt; 8

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